



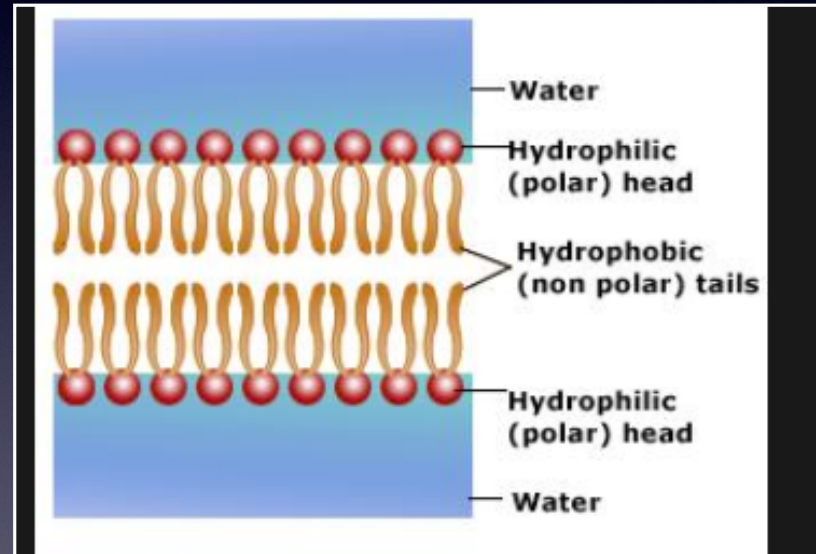
Cell Analogy Project :Amusement Park

Three Layers to the Park - Generalized Cell

- Entry to the park - Plasma Membrane : Is made of a phospholipid bilayer which has the ability to open and close channels to allow things to enter and exit .
- Around the inside of the park- Cytoplasm: location of all organelles, people, inside the cell.
- Cytoplasm has 3 parts: -Cytosol: is the liquid. Organelles: Metabolic machinery. Inclusions : Melanin for hair and skin color.
- Headquarters of the park- Nucleus: holds DNA, the building map for protein. Needed for cell reproduction.

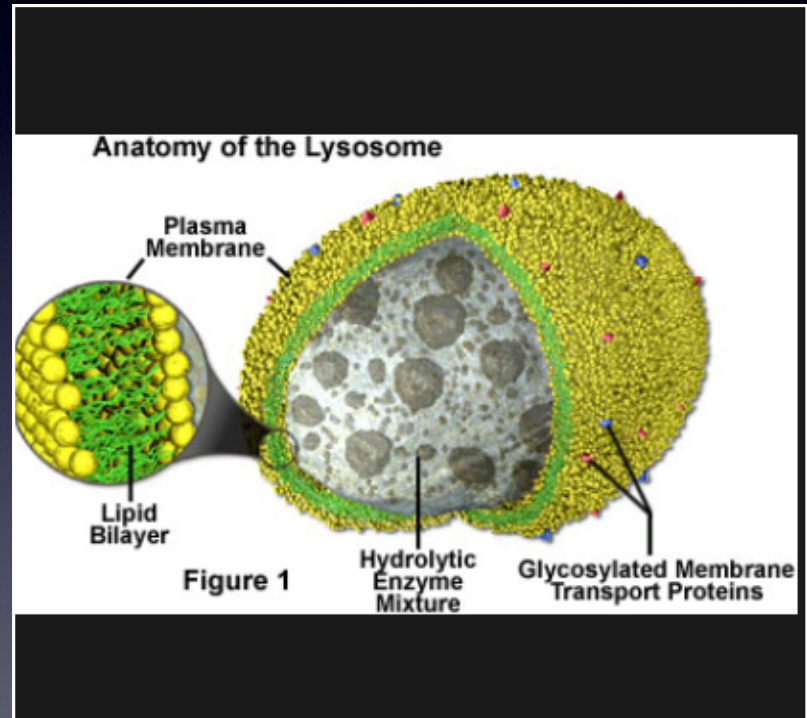
* Phospholipid Bilayer

- Has 2 fat (lipid) layers
- Hydrophilic: likes water, which is on the inside and outside of the membrane.
- Hydrophobic: hates water, which is on inside of the cell.



Trash Collector- Lysosomes

- Lysosomes get rid of bacteria in the cell.
- Lysosomes are also found in phagocytes.



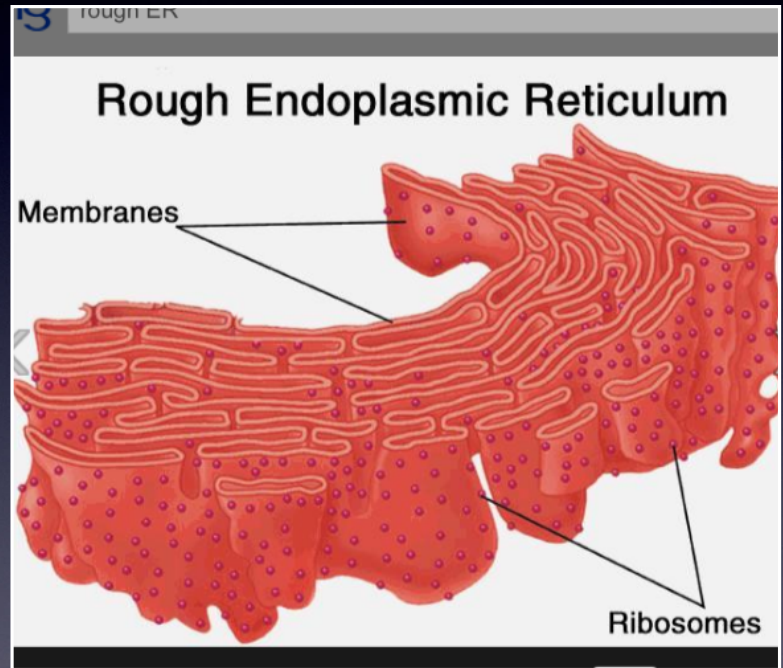
Communication: Smooth ER

- The smooth endoplasmic reticulum communicates with the Rough ER and makes enzymes to digest fats, drugs and pesticides.



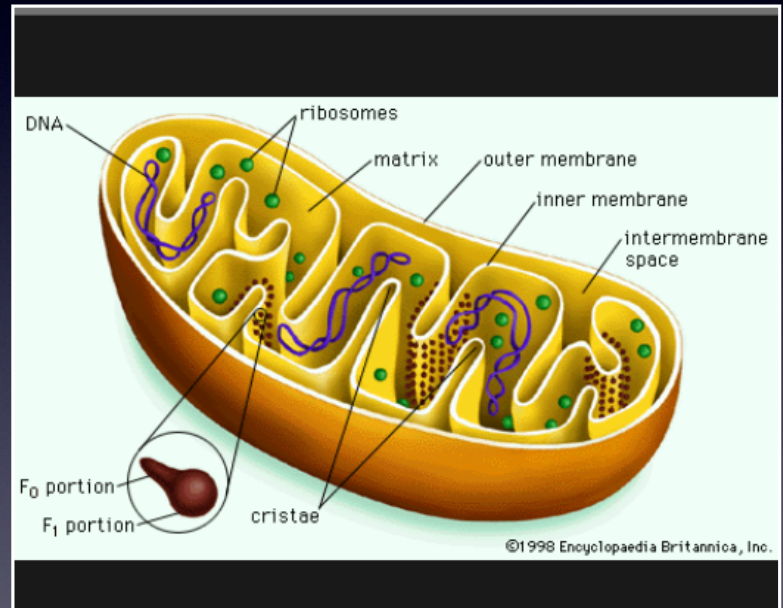
Transportation - Rough ER

- The Rough ER is studded with ribosomes and has tiny channels that circulates through the cell to send out food (protein) to all part of the cell.
- Ribosomes are made from protein and this energy is used in the cytoplasm.



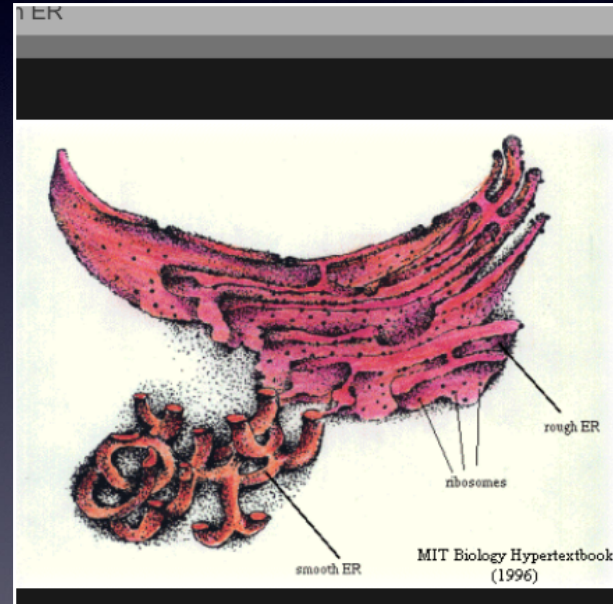
Powerhouse - Mitochondria

- The mitochondria is a sausage shaped organelle.
- It reacts with oxygen to breakdown food then releases energy.



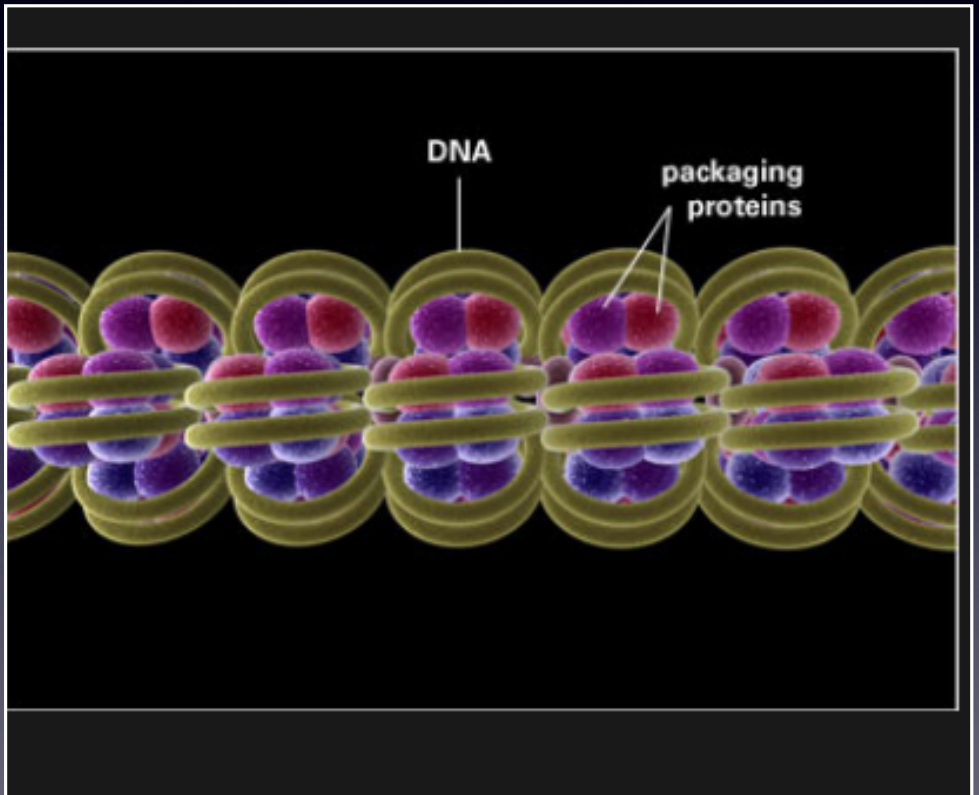
Traffic Director - Golgi Apparatus

- The Golgi Apparatus gets the protein from the Rough ER, changes the protein and repackages them for redistribution to the plasma membrane- the plasma membrane will release these packaged proteins and enzymes.



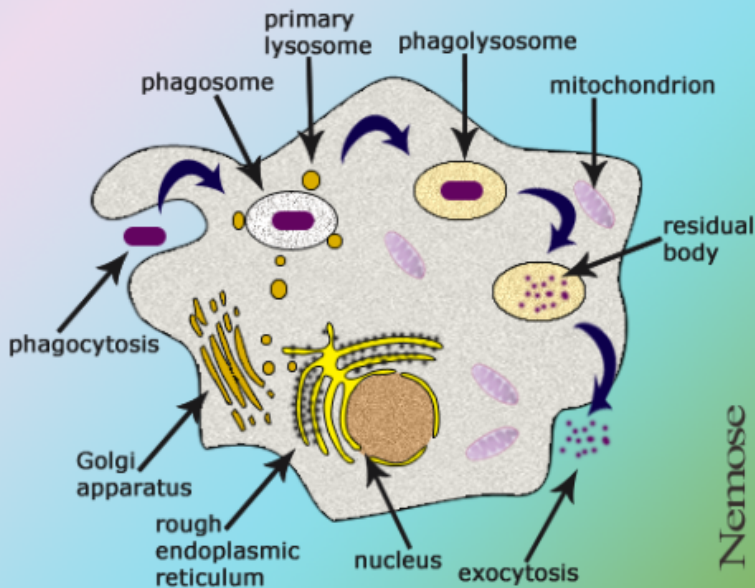
Storage- Chromatin

- Genetic material (DNA) found inside of the nucleus.



Security- Nuclear Membrane

Phagocytosis diagram



- Lets thing in and out of the nucleus.
- -Phagocytosis: This is NOT a location but it is a process. They eat dirt, junk and bacteria that might harm the cells (found in the white blood cells).